UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/017,833	12/12/2001	Alan Glen Solheim	129250-002052/US/CPA	6722

32498   7590   05/13/2009
CAPITOL PATENT & TRADEMARK LAW FIRM, PLLC
P.O. BOX 1995
VIENNA, VA 22183

EXAMINER
PHAN, HANH

ART UNIT	PAPER NUMBER
2613	

MAIL DATE	DELIVERY MODE
05/13/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _18 January 2009_.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1 and 3-36_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1 and 3-36_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

        1.☐ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____ .

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____ .

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application

6)☐ Other: _____ .

DETAILED ACTION

1.   This Office Action is responsive to the Amendment filed on 01/18/2009.

Claim Rejections - 35 USC § 102

2.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by
> another filed in the United States before the invention by the applicant for patent or (2) a patent
> granted on an application for patent by another filed in the United States before the invention by the
> applicant for patent, except that an international application filed under the treaty defined in section
> 351(a) shall have the effects for purposes of this subsection of an application filed in the United States
> only if the international application designated the United States and was published under Article 21(2)
> of such treaty in the English language.

3.   Claims 1 and 3-36 are rejected under 35 U.S.C. 102(e) as being anticipated by

Zhou et al (Pub. No.: US 2003/0016410).

The applied reference has a common inventor with the instant application.

Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art

under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome

either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in

the reference was derived from the inventor of this application and is thus not the

invention "by another," or by an appropriate showing under 37 CFR 1.131.

Regarding claims 1, 10, 18, 21, 25 and 33, referring to Figures 1A, 1B, 2A, 2B

and 3, Zhou et al teaches a method of optimizing the performance of a connection in a

wavelength switched optical network, comprising:

for all wavelengths available for transporting user signals in the network, storing

wavelength performance data in a wavelength performance database (i.e., Figs. 1A, 1B,

2A, 2B and 3, pages 3-7, paragraphs [0045]-[0114] and abstract section);

selecting a path with one or more regenerator sections (i.e., Figs. 1A, 1B, 2A, 2B

and 3, pages 3-7, paragraphs [0045]-[0114] and abstract section); and

assigning a set of wavelengths to the path based on the wavelength performance

data wherein the assignment step further comprises: (a) for each regenerator section of

the path, selecting a wavelength from the wavelength performance database based on

connectivity data for the regenerator section available from a topology database; (b)

determining a path performance parameter; (c) establishing said connection along the

path whenever the path performance parameter is better than a threshold; and (d)

otherwise, selecting a further path and repeating steps a) to c) (i.e., Figs. 1A, 1B, 2A, 2B

and 3, pages 3-7, paragraphs [0045]-[0114] and abstract section).

Regarding claim 3, Zhou et al further teaches the path performance parameter is

the Q factor (i.e., Figs. 1A, 1B, 2A, 2B and 3, pages 3-7, paragraphs [0045]-[0114]).

Regarding claim 4, Zhou et al further teaches the step of determining comprises:

identifying all optical devices connected in the path from the topology database;

importing measured performance data for the path and device specifications for the

optical devices; and calculating the path performance parameter using the measured

performance data and the device specifications (i.e., Figs. 1A, 1B, 2A, 2B and 3, pages

3-7, paragraphs [0045]-[0114]).

Regarding claim 5, Zhou et al further teaches the wavelength performance data

comprises a correspondence between attainable reach for each wavelength available in

the network and a plurality of fiber types (i.e., Figs. 1A, 1B, 2A, 2B and 3, pages 3-7,

paragraphs [0045]-[0114]).

Regarding claim 6, Zhou et al further teaches the wavelength performance data

further includes launch power-reach information for all wavelengths available in the

network (i.e., Figs. 1A, 1B, 2A, 2B and 3, pages 3-7, paragraphs [0045]-[0114]).

Regarding claim 7, Zhou et al further teaches the step of storing includes

grouping all wavelengths available in the network into bins of reach, each bin

corresponding to a different range of reach distances, and categorizing the wavelengths

within a bin by fiber type (i.e., Figs. 1A, 1B, 2A, 2B and 3, pages 3-7, paragraphs

[0045]-[0114]).

Regarding claim 8, Zhou et al further teaches determining a worst performing

wavelength of the set of wavelengths and upgrading the connection by replacing the

worst performing wavelength (i.e., Figs. 1A, 1B, 2A, 2B and 3, pages 3-7, paragraphs

[0045]-[0114]).

Regarding claim 9, Zhou et al further teaches the wavelength performance data

includes the wavelength natural reach for all wavelengths available in the network for a

plurality of fiber types, and the connectivity data includes the length of the regenerator

section (i.e., Figs. 1A, 1B, 2A, 2B and 3, pages 3-7, paragraphs [0045]-[0114]).

Regarding claim 11, Zhou et al teaches further comprising: for a specified

regenerator section of the path, modifying operation of a selected wavelength for

increasing the reach of the selected wavelength; and controlling operation of all other

wavelengths passing through the specified regenerator section for maintaining a

respective wavelength performance data for the respective other wavelengths within a

respective range (i.e., Figs. 1A, 1B, 2A, 2B and 3, pages 3-7, paragraphs [0045]-

[0114]).

Regarding claim 12, Zhou et al further teaches the step of modifying comprises

adjusting a tunable parameter of a device of the specified regenerator section (i.e., Figs.

1A, 1B, 2A, 2B and 3, pages 3-7, paragraphs [0045]-[0114]).

Regarding claim 13, Zhou et al further teaches the tunable parameter is one of

gain, dispersion or both (i.e., Figs. 1A, 1B, 2A, 2B and 3, pages 3-7, paragraphs [0045]-

[0114]).

Regarding claim 14, Zhou et al further teaches the step of modifying comprises

controlling the launch power of the selected wavelength (i.e., Figs. 1A, 1B, 2A, 2B and

3, pages 3-7, paragraphs [0045]-[0114]).

Regarding claim 15, Zhou et al further teaches the step of assigning comprises

mapping a transmitter to the wavelength according to reach performance of the

transmitter (i.e., Figs. 1A, 1B, 2A, 2B and 3, pages 3-7, paragraphs [0045]-[0114]).

Regarding claim 16, Zhou et al further teaches the step of assigning comprises

mapping a receiver to the wavelength according to the performance of the receiver (i.e.,

Figs. 1A, 1B, 2A, 2B and 3, pages 3-7, paragraphs [0045]-[0114]).

Regarding claim 17, Zhou et al teaches further comprising replacing the selected

wavelength with a different wavelength from a different transmission band from that of

the selected wavelength (i.e., Figs. 1A, 1B, 2A, 2B and 3, pages 3-7, paragraphs [0045]-[0114]).

Regarding claim 19, Zhou et al further teaches the step of measuring comprises, for each node of the network: determining all free wavelengths that are not used for live traffic exiting the node; for each the free wavelength, setting up a test connection between a transmitter at the node and a next receiver; and measuring the performance parameter for all the test connections (i.e., Figs. 1A, 1B, 2A, 2B and 3, pages 3-7, paragraphs [0045]-[0114]).

Regarding claim 20, Zhou et al further teaches storing the performance parameter in a measurement database (i.e., Figs. 1A, 1B, 2A, 2B and 3, pages 3-7, paragraphs [0045]-[0114]).

Regarding claim 22, Zhou et al further teaches the path performance parameter includes the cost of the path and the Q factor of the path (i.e., Figs. 1A, 1B, 2A, 2B and 3, pages 3-7, paragraphs [0045]-[0114]).

Regarding claim 23, Zhou et al teaches further comprising: a measurement database for storing measured performance data for each regenerator section of the network; and an interface between the measurement database and a plurality of optical devices of the network for transmitting the measured performance data from the devices to the measurement database (i.e., Figs. 1A, 1B, 2A, 2B and 3, pages 3-7, paragraphs [0045]-[0114]).

Regarding claim 24, Zhou et al teaches further comprising a wavelength exerciser for setting-up test connections on all regenerator sections, for each

wavelength unused on the regenerator section to populate the measurement database

with measured data (i.e., Figs. 1A, 1B, 2A, 2B and 3, pages 3-7, paragraphs [0045]-

[0114]).

Regarding claim 26, Zhou et al teaches further comprising collecting a plurality

of further performance data from an optical device connected in the path (i.e., Figs. 1A,

1B, 2A, 2B and 3, pages 3-7, paragraphs [0045]-[0114]).

Regarding claim 27, Zhou et al further teaches the optical device is an optical

amplifier and the further performance data is one or more of span gain/loss, power level

and reflections level (i.e., Figs. 1A, 1B, 2A, 2B and 3, pages 3-7, paragraphs [0045]-

[0114]).

Regarding claim 28, Zhou et al further teaches the optical device is an optical

amplifier and the further performance data is one or both of the Raman power and

Raman gain (i.e., Figs. 1A, 1B, 2A, 2B and 3, pages 3-7, paragraphs [0045]-[0114]).

Regarding claim 29, Zhou et al further teaches the optical device is a transmitter

and the further performance data is the launch power (i.e., Figs. 1A, 1B, 2A, 2B and 3,

pages 3-7, paragraphs [0045]-[0114]).

Regarding claim 30, Zhou et al further teaches the optical device is a receiver

and the further performance data is one or more of the sensitivity level, BER, Q factor,

and eye opening (i.e., Figs. 1A, 1B, 2A, 2B and 3, pages 3-7, paragraphs [0045]-

[0114]).

Regarding claim 31, Zhou et al further teaches the optical device is a receiver

and the further performance data is the link chromatic dispersion (i.e., Figs. 1A, 1B, 2A,

2B and 3, pages 3-7, paragraphs [0045]-[0114]).

Regarding claim 32, Zhou et al further teaches the measured performance data

include power levels and noise levels measured in each the respective measurement

point for each wavelength traveling along the path (i.e., Figs. 1A, 1B, 2A, 2B and 3,

pages 3-7, paragraphs [0045]-[0114]).

Regarding claim 34, Zhou et al further teaches the step of modifying comprises

adjusting the launch power of the specified wavelength until a performance parameter

of the regenerator section is within an operational range (i.e., Figs. 1A, 1B, 2A, 2B and

3, pages 3-7, paragraphs [0045]-[0114]).

Regarding claim 35, Zhou et al further teaches the step of modifying comprises

changing the gain/loss of the specified wavelength (i.e., Figs. 1A, 1B, 2A, 2B and 3,

pages 3-7, paragraphs [0045]-[0114]).

Regarding claim 36, Zhou et al further teaches the step of controlling includes

selecting the other wavelengths to provide greater wavelength spacing (i.e., Figs. 1A,

1B, 2A, 2B and 3, pages 3-7, paragraphs [0045]-[0114]).

Response to Arguments

4   Applicant's arguments with respect to claims 1 and 3-36 have been considered

but are moot in view of the new ground(s) of rejection.

Conclusion

5.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hanh Phan whose telephone number is (571)272-3035.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kenneth Vanderpuye, can be reached on (571)272-3078. The fax phone number for the organization where this application or proceeding is assigned is (571)273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-4700.

/Hanh Phan/

Primary Examiner, Art Unit 2613